

Expanded molecular phylogeny of the genus *Bicyclus* shows the importance of increased sampling for detecting semi-cryptic species and highlights potentials for future studies

KWAKU ADUSE-POKU, PAUL M. BRAKEFIELD, NIKLAS WAHLBERG & OSKAR BRATTSTRÖM

Supplemental data S2: The best partitioning schemes and optimal evolutionary models for each dataset.

Settings used

alignment : \2014MYCALESINA.phy
branchlengths : linked
models : HKY, GTR+G, GTR, HKY+G, JC+G, JC
model_selection : bic
search : greedy

Best partitioning scheme

Scheme Name : step_18
 Scheme lnL : -118570.30749
 Scheme BIC : 241599.46334
 Number of params : 498
 Number of sites : 7735
 Number of subsets : 12

Subset	Best Model	Subset Partitions	Subset Sites
1	GTR+G	CO11	1-1475\3
2	GTR+G	CO12	2-1475\3
3	GTR+G	CO13	3-1475\3
4	GTR+G	Efa1, RpS22	1476-2715\3, 3408-3817\3
5	GTR+G	Arginine1, Efa2, GAPDH2, MAD2, RpS52	1477-2715\3, 2717-3406\3, 3819-4434\3, 4847-5442\3, 6294-7025\3
6	HKY+G	Arginine2, Efa3, GAPDH3, MAD3, RpS53, Wg3	1478-2715\3, 2718-3406\3, 3820-4434\3, 4437-4846\3, 4848-5442\3, 6295-7025\3
7	GTR+G	CAD1, GAPDH1, IDH2, MAD1, RpS51	2716-3406\3, 3818-4434\3, 5443-6292\3, 6293-7025\3, 7027-7735\3
8	GTR+G	RpS21	3407-3817\3
9	GTR+G	RpS23	3409-3817\3
10	GTR+G	Arginine3, Wg1	4435-4846\3, 4849-5442\3
11	GTR+G	CAD2, IDH3, Wg2	4436-4846\3, 5444-6292\3, 7028-7735\3
12	HKY+G	CAD3, IDH1	5445-6292\3, 7026-7735\3

Scheme Description in PartitionFinder format

Scheme_step_18 = (CO11) (CO12) (CO13) (Efa1, RpS22) (Arginine1, Efa2, GAPDH2, MAD2, RpS52) (Arginine2, Efa3, GAPDH3, MAD3, RpS53, Wg3)
 (CAD1, GAPDH1, IDH2, MAD1, RpS51) (RpS21) (RpS23) (Arginine3, Wg1) (CAD2, IDH3, Wg2) (CAD3, IDH1);

RaxML-style partition definitions

DNA, p1 = 1-1475\3

DNA, p2 = 2-1475\3

DNA, p3 = 3-1475\3

DNA, p4 = 1476-2715\3, 3408-3817\3

DNA, p5 = 1477-2715\3, 2717-3406\3, 3819-4434\3, 4847-5442\3, 6294-7025\3

DNA, p6 = 1478-2715\3, 2718-3406\3, 3820-4434\3, 4437-4846\3, 4848-5442\3, 6295-7025\3

DNA, p7 = 2716-3406\3, 3818-4434\3, 5443-6292\3, 6293-7025\3, 7027-7735\3

DNA, p8 = 3407-3817\3

DNA, p9 = 3409-3817\3

DNA, p10 = 4435-4846\3, 4849-5442\3

DNA, p11 = 4436-4846\3, 5444-6292\3, 7028-7735\3

DNA, p12 = 5445-6292\3, 7026-7735\3